

### ABSTRACT

An apparatus and method of a programmable hysteresis comparator capable of producing a digital signal in response to differential input signals is disclosed. In one embodiment, the programmable hysteresis comparator includes a hysteresis offset  
5 programmable circuit that is operable to selectively provide a hysteresis offset in response to a programmable hysteresis offset control signal. The programmable hysteresis comparator further includes a comparator circuit, which is capable of receiving differential input signals. The hysteresis comparator is operable to output a digital signal in response to differential input signals and the hysteresis offset.